

NepaLinux User Manual Version 1.0

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Table of Contents

- **About This Manual**
- **Getting started**
- **History of computers**
- **Operating systems**
- **GNU, Free/Open Source Software & Linux**
- **GNU/Linux Distributions**
- **Debian GNU/Linux**
- **Debian Derivatives**
- **Localization**
- **NepaLinux**

What is NepaLinux?

Minimum Hardware Requirements

Getting NepaLinux

License

- **Using NepaLinux**

Bootling from Live CD

Installing into hard disk

- **Basic Linux Administration**

Basic Commands

GNU/Linux System Administration

User Administration

- **Gnome Desktop**

Xwindow Systems

Window Managers

Gnome Desktop Environment

Main Components of Gnome Desktop

- **Using Nepali Gnome Desktop**

Language Selection

Starting, Logging in and Logging out

Nepali input system

Date and Time

Workspaces

Nautilus file manager

Running Applications

Using Common Mass Storage Devices

Desktop

Preferences

Taskbar

Gnome applet

Adding icons in Gnome panel

Screen Resolution

Desktop Themes

Gnome Login Screen

Fonts

Multimedia

Playing Digital Audio Files

Playing VCD/DVD

Using Totem

Web browsers

Mozilla:

Adding Flash Plug in

Java Support for NepaLinux

Adding Java VM Plug in

Epiphany Web Browser

Mail Clients

Mozilla Mail

Evolution

Scanner

Working with xsane

Misc

• CD/DVD Writing

Erasing CD/DVD

Burning files/folders into CD/DVD

Burning Image (ISO) files into CD/DVD

Duplicating CD/DVD

Creating image from folders

Running k3b

• Printers

• Networking

Network Configuration

Modem and Internet account Configuration

File and Print Sharing with Samba

• OpenOffice.org

Nepali OpenOffice.org

Using OpenOffice.org

- **Package Management**

Debian Package Management System

Package Management in NepaLinux

- **Upgrading**

NepaLinux

Packages

- **Using Repositories**
- **Kernel Upgrading**
- **Getting Help**
- **Troubleshooting**
- **References**
- **Appendix**

About The Manual

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Getting started

This Manual “NepaLinux User Manual Version 1.0” has the help and guidelines for using NepaLinux 1.0. NepaLinux is a GNU/Linux distribution developed and released by Madan Puraskar Pustakalya. The target audience of NepaLinux are desktop users at government sectors, education sectors, corporate houses, home users etc. NepaLinux comes with localized open source software which can be used and modified freely as per the General Public License (GPL). Please refer to the section GNU General Public License in the appendix of this document for the details of the license.

History of Computers

The word 'computer' is derived from the word 'compute' which means to calculate.

The computers that we use today is the result of our long search for a device to help in performing computations. The search dates as back as to the 17th century. A series of scientific breakthroughs by many people have contributed to produce this electronic machine, the computer.

Listed below are some of the important dates in the evolution of computer:

1. In 3000 BC, a device called Abacus was developed by the Chinese. This is said to be the first mechanical computing device.
2. In 1617, John Napier, a Scottish mathematician developed a device which is called Napier bones. With the help of this device, multiplication and addition were possible.
3. In 1642, Blaise Pascal, a French mathematician invented the first mechanical calculator
4. In 1673, Gottfried Wilhelm Leibniz, a German invented the Leibniz calculator which was used for addition, subtraction and multiplication.
2. In 1804, Joseph Marie Jacquard, a French made yet another significant contribution. He developed a plate with multiple holes to control the weaving patterns. This idea was later used to develop the Punch Card to store data.
3. Around 1822, Charles Babbage, a professor of mathematics at the Cambridge University devised an automatic calculating machine called the Difference Engine.
4. The next significant invention came from Dr. Herman Hollerith, an American. Hollerith built a computer to analyze the Census data of the United States in 1890. This computer was electro-mechanical and was named Census machine. Herman Hollerith founded a company named "The Computing Tabulating Recording Company" which today is the IBM corporation.
5. Howard Aiken, built the first fully electro-mechanical computer named MARK-1
6. In 1945, a significant contribution was made by John Von Neumann, a Frenchman working for IBM. He designed the basic structure of a computer that had the capacity to :
 - a) Perform Logical functions.
 - b) Perform Repetitive functions.
 - c) Store data and instructions (Memory)

In 1945, a fully electronic computer named ENIAC was built by Presper Eckert and John W Mauchly. ENIAC stands for Electronic Numerical Integrator and Calculator.

After 1945, as special components began to be added, the capacity of computer increased drastically. Depending on the technology used, computers got categorized into different generations.

I Generation computers (1945 – 1955):

In computers of this generation, the main component in use were the vacuum tubes. The first computer used 17000 vacuum tubes, weighed 30 tons and occupied an area of a big hall. Vacuum tubes took a lot of time to warm up and consumed massive amount of electricity. Typical examples of the computers of this generation are ENIAC, UNIVAC-1

II Generation Computer (1955 - 1965):

The real breakthrough in computers started with the discovery of the transistors. Transistor, though a tiny semi-conductor device gave the following significant benefits to computer.

1. Reduced the size of computer
2. Reduced manufacturing and running costs.
3. Improved reliability and processing power of the computer

Computers which were built using transistors became the second generation computers. Some of the computers of this generation are IBM 7000 SERIES, IBM 1620, IBM 1401.

Second generation computers were significantly faster than the first generation computers.

III Generation computers (1965 – 1970):

Computers of this generation started using the Integrated Circuit (IC). IC is a combination of transistors put together on a single chip (wafer) of silicon. ICs are very small. A small chip about the size of a finger nail is equivalent to 2000 transistors. The use of chip technology reduced the size of computer enormously. Some of the computers of this generation are IBM 360, IBM 370

IV Generation Computers (1970 onwards):

From 1970 onwards we enter into the era of Fourth Generation Computers, in which the electronic components got further miniaturized. Large Scale Integration (LSI) and Very Large Scale Integration (VLSI) of circuits got replaced by a few silicon chips. Millions of transistors are packed in a single VLSI chip. The size of the chip is further shrinking. Manufacture of very small and light weighted laptops has become possible. Along with the reduction in size, there is significant reduction in prices too.

V Generation Computers:

From 1982 onwards research is continuously taking place to develop a Fifth Generation computer that will have the thinking power just like that of the human brain. These computers will be based on Artificial Intelligence (AI).

Operating Systems

Operating system is the first layer of software which is loaded into the computer memory when the computer starts up. All other software that gets loaded afterwards depend on the preloaded software (operating system) in providing the various common core services.

These common core services include, but are not limited to: disk access, memory management, task scheduling, and user interfacing. The user interface provides means of input - allowing the users to control the system, output - allowing the system to inform the users. The portion of code that performs these core services is called the "kernel" of the operating system. So, in other words, an operating system (OS) is the system software responsible for the direct control and management of hardware and basic system operations. Additionally, it provides a foundation for running application software such as word processing programs and web browsers.

Some Examples of Operating Systems are:

- * UNIX
- * Linux
- * Mac OS
- * Microsoft Windows
- * Solaris
- * MS-DOS

GNU, Free/Open Source Software & Linux

The GNU (GNU's Not Unix) project was started by Richard Stallman, also known as RMS, in the year 1984 to create a free Unix-like operating system. The Free Software Foundation (FSF) was created a year later to promote free software and the GNU project. Here, the term 'free' refers to freedom as in speech, not price.

Till 1991, it had created all the software and utilities required for a complete operating system except the kernel, which is the core of an operating system. That year, a Finnish college student, Linus Torvalds, created a Unix-like kernel called Linux and combined it with the required software and utilities from GNU project to form a Unix-like operating system.

In 1998, a group of developers came together to label a new term called 'Open Source Software' in response to the release of Netscape source code. The Open Source Initiative (OSI) was formed along with the Open Source Definition. Among them was Eric Raymond whose famous book 'The Cathedral and The Bazaar' was one of the factors which led Netscape to open the source code.

Free/Open source software allows people to read, redistribute, and modify the source code for a piece of software. People improve it, adapt it, fix bugs and all this can happen at an astonishing speed in the distributed development model as compared to the conventional one.

GNU/Linux Distributions

GNU/Linux distribution, is a Unix-like operating system comprising software components such as the GNU/Linux kernel and assorted free, open source, and possibly proprietary software. There are currently over three hundred Linux distribution projects in active development, their respective distributions being revised and improved. A Linux Distribution can be derived from another Linux distribution by the necessary customizations to the original ones. The most popular Linux Distributions are:

- * Debian GNU/Linux
- * Red Hat Linux
- * Fedora Core
- * SuSe Linux
- * Knoppix
- * More....

Distributions are developed and supported by communities or commercial companies. Debian GNU/Linux for example is supported by the Debian community. On the other hand, Gentoo Linux OR is developed and supported by commercial companies like Red Hat and Novell. It is up to the user, which one to use, either commercial or the other.

Debian GNU/Linux

Debian is a widely used distribution of free software developed by the joint efforts of volunteers from around the world. It consists of a lot of basic tools of the operating system from the GNU project and supports the common computer architectures like: x86, Power PC etc. Debian GNU/Linux is the basis for several other distributions, including Knoppix, Ubuntu Linux and NepaLinux.

Debian is supported by donations made available by the Software in the Public Interest, a non-profit umbrella organization for free software projects.

Debian Derivatives

Debian Derivatives are subsets of Debian which are configured to support a particular target group out-of-the-box. For example: Debian aimed for science, Debian aimed for schools etc. In our case, NepaLinux, which is also a Debian Based Linux Distribution is targeted specially for Desktop users in the Nepali Language. The popular Debian Derivatives are:

- * DebianGIS: a CDD for Geographical Information and Earth Observation Systems (includes OpenGIS and GPSTk).
- * Debian Junior: For children
- * Debian Med: For Medical
- * DebianNeo: Debian Stable for newbies
- * Skolelinux (built by the DebianEdu project): aimed for schools.
 - * Knoppix
- * Mepis
- * Linspire
- * Gnoppix
- * Morphix

Localization

Localization is the adaptation of an object to a locality. An example is in software localization, where the messages which a program presents to a user need to be translated into various languages.

Basic Localization involves the following procedures:

- * Creating the Locales
- * Font Development
- * Choosing the input method and creating keyboard mappings
- * Updating the rendering engine to support native language
- * Translation of strings of the software to be localized
- * Localization of the applications to support the language

NepaLinux

What is NepaLinux?

NepaLinux is a Debian, Knoppix and Morphix based GNU/Linux Distribution focused for Desktop users in Nepali language. It contains applications for Desktop users like: OpenOffice.org, Nepali Gnome Desktop, Nepali input systems etc. The development and distribution of NepaLinux is done by Madan Puraskar Pustakalaya (<http://www.mpp.org.np>). The official site for NepaLinux is <http://www.NepaLinux.org>.

Minimum Hardware Requirements

- * Intel Pentium I or equivalent Processor
- * 64 MB of RAM
- * 2.0 GB of Hard disk space
- * CD-ROM Drive

Getting NepaLinux

NepaLinux can be collected from Madan Puraskar Pustakalaya or can be downloaded directly from

<http://www.NepaLinux.org/downloads/> .

License

NepaLinux, a Nepali GNU/Linux distribution, is distributed under the GNU GPL license. The GNU General Public License (GNU GPL or simply GPL) is a free software license, originally written by Richard Stallman for the GNU project. It has since become the most popular license for free/open source software. The latest version of the license, version 2, was released in 1991.

The GPL grants the recipients of a computer program the following rights, or "freedoms":

- * The freedom to run the program, for any purpose.
- * The freedom to study how the program works, and modify it. (Access to the source code is a precondition for this)
- * The freedom to redistribute copies.
- * The freedom to improve the program, and release the improvements to the public. (Access to the source code is a precondition for this)

Please refer to Appendix to view the complete license.

Using NepaLinux

Booting from Live CD

NepaLinux is a Live-CD distribution that can be run directly from the CD. In this regard, one can actually get a independently working complete Linux distribution without even having a hard disk. This is done by loading the operating system completely into the memory.

To use NepaLinux through CD, just insert the CD into the CD ROM drive and restart the computer. The BIOS must be configured so that CD-ROM is your first boot device. The default root password for NepaLinux liveCD is nepali.

Some commonly occurring problems:

1. When the computer boots up completely, you might see desktop area bigger than the actual screen size with the hidden and larger icons.

To solve this problem you need to reboot the computer and press F4 in the grub splash screen and select 800x600 as resolution.

1. Fails to enter into GUI mode and falls back to terminal saying "Operation failed".

To solve this problem reboot the computer, select "Submenu" and enter - try vesa or fbdev.

With Live CD you can do almost all including using word-processor, listening to music, connecting to networks and Internet etc.

Installing into Hard disk

NepaLinux can also be installed into the hard disk. NepaLinux can also co-exist with other operating systems like MS-Windows. To install NepaLinux, you need at least one Linux native partition and a swap partition in your hard disk. Size of the swap partition is usually kept double of the ram size. Linux native partition should be at least 2 GB.

For NepaLinux installation, you need to insert the NepaLinux CD into the CD/DVD drive and reboot the computer. When the computer boots up completely you are supposed to follow the following steps.

1. Click "Desktop" --> "Preferences" --> "Install to Hard disk".
2. In the NepaLinux Installer dialog box, click Next.

3. In the dialog box that appears after step 2, select the hard disk where you want to install NepaLinux (it will be selected by default if you have only one hard disk), click next.
4. Cfdisk partitioner will appear. (Note: You are about to make partitions. Be careful while working on this)
5. Select Free space and select “New” to create a new partition, select “Primary” and enter partition size , select “Type” and select file system type as 83(for Linux Native). Make the Linux native partition as “Bootable” (Note: This partition doesn't have to be primary, but making it so, will ease recovery in case of disaster)
6. Create one more partition, keep the size at least double the size of RAM and choose its type as 82 (For Linux swap partition).
7. Finally select “Write”. and type “Yes” for confirming the creating of new partition table.
8. Select "Quit"
9. In the next dialog box, after selecting the swap partition. click on "Next"
10. In the next dialog box, select the partition that you created in step no. 5. The “/” file system will be installed in this partition.
11. Click "next". The installation will start and take around 15 – 25 minutes.
12. Enter the desired host name in the next dialog box
13. Enter password for “root” user.
14. After that in the next screen, type in a username of your choice. The default username is “nepali” This username will be used to login to the system. “root” login is disabled by default. It can be enabled through the main menu. To do so, go to “Applications”----> “System Tools” --> “Login Screen Setup” --> “Security”.
15. In the next screen select “Install GRUB on the MBR” option. Grub is an excellent boot loader which can recognize and list other operating systems that are already installed in the hard disk.
16. Restart the computer.
17. The system will start at the first boot stage and the necessary updates/installation will take place.
18. After few minutes “Configuring sysv-rc bootsplash” screen will appear. It will ask “Should bootsplash patch your startup scripts?” Select “Yes”.
19. In the “Configuring bootsplash” dialog box, it will ask you to select an initrd image, select “None”.
20. Next, “Configuring bootsplash” screen will appear. Select all by pressing the space bar one at a time. Once “Select the resolution you would like to enable bootsplash for” appears, press OK.
21. On the “Select your boot loader” dialog box, select grub and press OK twice.
22. On the “Activate init script?” dialog, select “Yes”. The installation will be complete at this stage.
23. Restart the computer.

Basic Linux Administration

Basic Commands

Following are some of the useful commands used in the linux administration:

ls (list)

It is used to list files, directories or the contents of the current directory if no option is specified. Some of the most commonly used options:

- * -l (long list): used to show a detailed list of all files like permissions, size, etc.
- * -a : used to display hidden files as well

cd (change directory)

It is used to change between directories. The following options can be used to change directories:

- * cd /etc: to change to /etc directory
- * cd newdir: to change to subdirectory newdir
- * cd : to change to home directory from any directory
- * cd - : to change to the last valid directory
- * cd .. : to move one directory level higher
- * cd ../.. : to move two directory levels higher

pwd (print working directory)

It is used to show the path of the current directory.

mkdir (make directory)

It is used to create new directories. The -p option allows to create a complete path. Example:

- * mkdir newdir
- * mkdir -p test/newdir

rmdir (remove directory)

It is used to delete directory or directories. The directory or directories must be empty. Example:

- * rmdir newdir

touch

It is used to create a new file with a size of 0 bytes or change the time stamp of a file.

rm (remove)

It is used to delete files. The -i option asks for confirmation before deleting while the -r option allows full directories to be deleted. Example:

- * rm test*
- * will delete all files in the current directory that begin with test

mv (move)

It is used to move one or more files to another directory. It is also used to rename a file. Examples:

- * mv *.txt /tmp will move all the files with .txt extension to /tmp
- * mv old_name new_name will rename old_name file to new_name file

cp (copy)

It is used to copy files and directories. The -r option used for copying directories.

- * cp source destination
- * Examples:
- ** cp -r newdir /tmp/testdir will copy the directory newdir with all its subdirectories to the directory /tmp/testdir and there will be a directory /tmp/testdir/newdir/

ln

It is used to create a link, which is a reference to a file. Two types of links are possible - hard links and soft links. Soft links are used more widely and they are also known as symbolic links or symlinks in short. They are created with the -s option. Example:

- * ln -s target linkname

Some of these actions can also be achieved graphically:

Accessing Files and Programs

To access files and programs, go to Places -> Home Folder. Then from the view pane of the File Manager, you can open files as well as run (launch) executable programs by doubleclicking on the icon representing them.

Creating New Folders

To create a new folder under the folder you are currently in, move the mouse to the menu bar at the top (just beneath the titlebar of the window) and click on File and then click on Create Folder. A new folder will appear on the view pane and you will have to type in the name of the new folder.

Copy Files and Folders

To copy a file, click on the file in the view pane to select it. Then select from the menu bar at the top,

Edit --> Copy File

Next open up the folder in which you want to copy the file to and then select from the menu bar at the top,

Edit --> Paste Files

Another way to copy a file is to right click on the file icon and then select “Copy File”. Then navigate to the icon of the folder where you want the copy to be placed in and then right click on the folder icon and select “Paste Files into Folder”.

The procedures above can be done with folders too. To copy more than one file or folder at a time, select multiple files/folders by holding down the CTRL key while clicking on the files or folders.

Moving Files and Folders

Moving a file or folder is different from copying as while moving, a copy of the file/folder is not made, i.e. only one copy of the file/folder exists, and the file/folder is transferred from one folder to another.

To move a file, click on the file in the view pane to select it. Then select from the menu bar at the top,

Edit --> Cut File

Next open up the folder in which you want to move the file to and then select from the menu bar at the top,

Edit --> Paste Files

Another way of moving a file is to drag and drop the file into the destination folder. The procedures above can be done with folders too. To move more than one file or folder at a time, select multiple files/folders by holding down the CTRL key while clicking on the files or folders.

Renaming Files and Folders

To rename a file, click on the file in the view pane to select it. Then select from the menu bar at the top,

Edit --> Rename

and then type in the new name. Alternately you can also right-click on the file and then select “Rename”. The procedures above can be done with folders too.

Deleting Files and Folders

To delete a file, click on the file in the view pane to select it. Then select from the menu bar at the top,

Edit --> Move to Trash

Alternately you can select the file and then use the DELETE key on the keyboard to delete the file. This has the same effect as moving the file to the Trash folder. It is still possible to salvage a temporarily deleted file which is existing in the Trash. To do this, double-click on the Trash icon on the desktop to open up the Trash folder. Then you can move the file you want to salvage to the desired folder. Note that if you delete the file from the Trash then it cannot be recovered anymore.

The procedures above can be done with folders too. To delete more than one file or folder at a time, select multiple files/folders by holding down the CTRL key while clicking on the files or folders.

Viewing and Modifying the Permissions of a File or Folder

To view the owner and group of a file/folder and/or to modify its permission settings, select the file/folder and select from the menu bar at the top,

File --> Properties

Click on the Permissions tab. The owner and group of the file/folder are displayed as well as the associated permissions.

Searching for Files or File Contents

find

It is used to search for files in real time.

- * find path criterion action

- * Eg. find . -name '*.txt'

grep

It is used to search through one or many files for a specific string and have the matching lines displayed. Some of the common options are:

- * -r: searches entire directory trees recursively

- * -i: ignores case

- * -v: gives all lines that do not contain the search string

- ** Eg. grep nepal /etc/testfile.conf

locate

It is used to find files by searching through its database located at /var/lib/locatedb. It is much faster than find command as locate searches through a database (/var/lib/locatedb), which is updated automatically. The changes after the update of database are not taken into account when locating files.

cat

It is used to display the contents of files. It can be used to redirect the output of files to another file. Examples:

- * cat file

- * cat file1 file2 >file

less

It is used to display contents of a file page by page.

1. Eg. less file

GNU/Linux System Administration

Following are some of the useful tools used in system administration:

Archiving Files:

tar can be used to create an archive, which is also called a tarball. Some of the commonly used options:

- * c is used to create an archive

- * v is used for verbose output

- * f is used to specify the archive file

- * Examples:

- * to create an archive,

- ** tar cvf files.tar *.txt

- * to extract files from an archive,

**** tar xvf files.tar**

Compressing and Decompressing Files:

gzip can be used to compress the tarball and gunzip to decompress it. bzip2 can also be used to compress the tarball and bunzip2 to decompress it.

* Examples to compress files

**** gzip files.tar**

**** bzip2 files.tar**

* Examples to decompress them

**** gunzip files.tar.gz**

**** bunzip2 files.tar.bz2**

Backing up with tar and gz or bz2

tar and gz or bz2 can be used together in one step to create a compressed tarball for backing up. the z option is used to create the gzipped archive. the j option is used to create the bz2-ed archive.

* Examples to make a compressed tarball

**** tar zcvf files.tar.gz *.txt**

**** tar jcvf files.tar.bz2**

* Examples to decompress them

**** tar zxvf files.tar.gz**

**** tar jxvf files.tar.bz2**

Task Automation

To share a parallel printer, add/edit the following block:

```
[printers]
comment = All Printers
browseable = no
path = /dev/lp0
printable = yes
public = no
writable = no
create mode = 0700
```

Two facilities can be used to automate tasks.

* at: It is used to execute a task at a specific time.

* cron: It is used to execute tasks at scheduled intervals.

Using “at”:

It is useful for scheduling a single future event. The command “atq” is used to list defined jobs while “atrm” used to delete a defined job. Example:

* at 21:00

* at > mail ram < ram.msg

* Note: Input can be ended with Ctrl + D

The /etc/at.allow and /etc/at.deny files can be used to allow or deny users to use “at”. The users listed in /etc/at.deny are not allowed to use “cron” and all other users are allowed. If file /etc/cron.allow exists, this supersedes cron.deny (ie, cron.deny is ignored) and allows only those listed in it to use “cron”.

Using cron:

It is useful for scheduling regularly happening events. The crontab command can be used to edit, install and view the job schedules. The /etc/at.allow and /etc/at.deny files can be used in the same way as 'at' to allow or deny users to use cron.

* Syntax

**** crontab [-u user] file**

**** crontab [-l | -r | -e]**

** -u user to install crontab for user, who must be privileged to use
** -e to create or edit the current crontab
** -l to list the contents of the current crontab
** -r to delete the current crontab

Each line of the file, consisting of six fields, is used for definition of one job. The first five fields define the time while the sixth field contains the command to run. This can contain any command or the full path of the shell script.

Format for the first five fields:

Field: Range

Minutes: 0-59

Hours: 0-23

Day of Month: 1-31

Month: 0-12

Weekday: 0-7

A field may be an asterisk (*), which stands for every value in the corresponding field. In the weekday field, 0 or 7 is Sunday.

Example:

`* /5 8-17 * * 1-5 fetchmail mailserver`

From Monday to Friday every five minutes between 8:00 to 17:00, the command fetchmail is run to fetch incoming emails from the computer mailserver.

cron.hourly, cron.daily and cron.monthly for system jobs:

Most GNU/Linux distributions have three directories in /etc called *cron.hourly*, *cron.daily* and *cron.monthly*. These let the system administrator to run jobs on an hourly, daily or monthly basis. Simply by placing a shell script here, jobs can be carried out at those intervals. There is no need to have a crontab entry for these jobs.

User Administration

User administration can be done with the following commands. Please note that the user administration can only be done by the root account.

adduser

It is used to add users to the system.

* Eg. `adduser nepali`

* Here, nepali will have its home directory as /home/nepali

usermod

It is used to modify an already existing user account.

* Eg. `usermod -d /nepalihome -m nepali`

* Here, the home directory of nepali is changed to /nepalihome and the -m option copies all the contents of user nepali to its new home directory

userdel

It is used to delete users from the system.

* Eg. `userdel -r nepali`

* Here, -r option is used to delete the users home directory as well

passwd

It is used to change a user's password. Only root can change others password

- * Eg. passwd nepali

A normal user can only change his/her own password and it can be changed if the passwd command is run without a username as an argument

- * Eg. passwd

To do the same graphically:**To add user:**

- * Go to Desktop -> Administration -> Users and Groups
- * On the Users tab, click Add User
- * Provide the appropriate information like username and password

To modify user:

- * Go to Desktop -> Administration -> Users and Groups
- * On the Users tab, select the user to modify and click Properties
- * Modify as required like changing password etc.

To delete user:

- * Go to Desktop -> Administration -> Users and Groups
- * On the Users tab, select the user to delete and click Delete
- * Press Delete when asked for confirmation

groupadd

It is used to add groups to the system.

- * Eg. groupadd nepali

groupmod

It is used to modify an already existing group.

- * Eg. groupmod -n newnepali nepali
- * Here, the name of the group nepali is modified to newnepali

groupdel

It is used to delete groups from the system.

- * Eg. groupdel nepali

To do the same graphically:**To add group:**

- * Go to Desktop -> Administration -> Users and Groups
- * On the Groups tab, click Add Group
- * Provide the appropriate information like groupname
- * Select the user and click Add to make any user a member of this group

To modify group:

- * Go to Desktop -> Administration -> Users and Groups
- * On the Groups tab, select the group to modify and click Properties
- * Modify as required like changing the group name, adding new members to the group, etc.

To delete group:

- * Go to Desktop -> Administration -> Users and Groups
- * On the Groups tab, select the group to delete and click Delete
- * Press Delete when asked for confirmation

Gnome Desktop**X Window System**

The X Window System (also referred to as "X" or X11) is the foundation for the graphical user interface on most Linux systems. X does not define how anything should look or behave, instead, X focuses on providing a standard way in which applications(the X clients), can display on the screen.

XFree86 is a freely redistributable open-source implementation of the X Window System. The XFree86 project adds hardware drivers for a variety of video cards and releases it as XFree86. Originally, XFree86 was only for Intel compatible chips, but now it also runs on PowerPC, Sparc, and Alpha Systems.

Window Manager

A window manager is the piece of software responsible for managing different windows that appear on your screen. The window manager controls the placement of windows, draws the borders and scrollbars. There are number of window managers available for X.

Metacity is the default window manager in the GNOME desktop. It is implemented with the GTK+ 2.x toolkit, and so integrates well with the GNOME 2.x platform.

Some other window managers are : Twm, Kwm, WindowMaker

Gnome Desktop Environment:

GNOME Desktop environment provides a graphical interface for Linux system. It includes a wide range of applications, including programs for email, Internet, messaging, word processing, financial accounting, conferencing, and more.

Apart from providing very easy-to-use desktop, gnome also provides gnome development platform for building applications that integrate into the rest of the desktop.

One nice thing with Linux is that, you're are not limited to a GUI provided by your OS manufacturer. You can in fact, have multiple desktop environments in a single system.

GNOME and KDE are the two mostly used desktop environments used with Linux.

Main Components of Gnome Desktop

Panels and Menu : Panels are areas in the GNOME Desktop from where you can access all of your system applications and menus. The gnome panel holds icons and other small applications which ease using your system . The top level panel in NepaLinux includes menu bar. The menu bar contains 3 special menus

Application menu:

Gives access to all standard applications.

Places:

Lists your home folder, networked servers, and the search feature etc.

Desktop:

Contains Preferences and Administration control panels, Log Out, and Help.

Using Nepali Gnome Desktop

Language Selection

With Live CD:

By Default the Live CD will boot into Nepali. For using NepaLinux in English Select ' NepaLinux GNU/LINUX 1.0 - en' before booting of the CD at the grub menu.

With Hard Disk installation:

Start the computer from hard disk. At the login screen, Click Language and Select Nepali(Nepal) and Press OK button. It will display the following information:

"You have chosen Nepali(Nepal) for this session, but your default setting is system default. Do you wish to make Nepali(Nepal) the default for future sessions?"

Click Make Default Button to make Nepali as default.

With the same procedure you can choose English if required later.

Starting , Logging in and Logging out:

At the login screen after the language selection or using default language, use the username and password that is created at the time of installation. You cannot login as 'root' by default. If you want to login as user 'root', go to Actions-->Configure the login Manager. It will ask the 'root' password that is created at the time of installation. Then go to Security and check "Allow root to Login with GDM". Click the close button and login with root. Remember, 'root' is the super user and unless required do not login with user 'root'.

In order to logout, Go to Desktop-->Log out in the top menu panel. Check "Save current setup" to save the currently active applications to be run by default at the next login and select "Log out". Finally press "OK" button to log out. Alternatively you can press CTRL+ALT+BACKSPACE together to log out easily.

Nepali Input system

NepaLinux uses SCIM input system by default. To get Nepali input, open up the application and press alt + spacebar. SCIM Panel appears at the bottom right of the screen. Press control + shift to switch between Nepali Romanized, Nepali Traditional and English keyboard layouts. Nepali Romanized keyboard layout is most appropriate for a novice in Nepali typing.

Date and Time

Date and Time are displayed on the top right corner of the gnome panel. Clock type can be changed between 12 hours system and 24 hours system -just right click over the date and time area and select preferences. Date and time can be adjusted in the similar manner.

Workspaces

You can subdivide the GNOME Desktop into separate workspaces. A workspace is a discrete area where you can work. You can specify the number of workspaces in the GNOME Desktop. You can switch to a different workspace, but you can only display one workspace at a time.

Nautilus file manager

Nautilus is the default file manager in gnome. With nautilus you can :
View your files and folders as icons or as a list.

Create, move, copy, rename, and remove files and folders. You can move files between folders by opening up two or more file manager windows. Just open a different folder in each window, then drag the files from one window to the other.

Execute program, run scripts or associate program through which to open a specific file type.

Set emblems to a particular file or folder to show its states e.g personal, urgent, special, shared etc.

Nautilus provides a special location where you can copy files and folders that you want to write to the CD. You can write the contents of this location to a CD.

Running Applications

The Run Application dialog lets you specify the exact program to run. When you run a command in the Run Application dialog, you cannot receive output from the command.

To run a command from the command line, either:

- * Go to Applications > Run Application or

- * Use shortcut keys: The default shortcut keys to display the Run Application dialog are Alt + F2. You can change the shortcut keys that display the Run Application dialog in the *Keyboard Shortcuts* preference tool.

Then, perform the following steps:

- * Enter the command that you want to run in the blank field.

Alternatively, to choose a command that you ran previously, click the down arrow button beside the command field, then choose the command to run.

Alternatively, select the Show list of known applications option to display a list of available applications.

You can also use the Run with file button to choose a file to append to the command line. For example, you can enter *emacs* as the command, then choose a file to edit.

Select the Run in terminal option to run the application or command in a terminal window. Choose this option for an application or command that does not create a window in which to run.

- * Click on the Run button on the Run Application dialog.

Using Common Mass Storage Devices

Floppy Disk Drives

Double click to Computer icon on the Desktop, insert the floppy and Double click the Floppy Disk Icon. Before removing the floppy disk from the disk drive, unmount it first by right clicking the Floppy icon and clicking Umount volume.

CDROM/DVD Drives

Double click to Computer icon on the Desktop, insert the CD/DVD discs and Double click the CD-ROM Icon. In order to eject the CD/DVD discs, right click the CD-ROM icon and click eject.

Flash Disk/ USB Drives

Nepalinux will auto detect the flash disk/USB drive. If not follow the manual procedures are below :

1. Insert the disk into the USB port
2. Click the Terminal icon at the top panel.
3. Do 'su - ' to change the user to 'root'
4. Usually Flash/USB disks use sda1 or sdb1. So do either 'mount /dev/sda1 /flash' or 'mount /dev/sdb1 /flash'
5. Before removing the disk to 'umount /flash'.

While booting from LiveCD, Double click on the computer icon and double click either sda1 or sda to use the flash/USB disks.

Desktop

The desktop is behind all of the other components. The desktop is an active component of the user interface. You can place objects on the desktop to quickly access your files and folders, or to start applications that you use often. User can alter desktop backgrounds by simply right clicking over the desktop area and selecting 'Change desktop background'. New desktop backgrounds can be downloaded from "<http://art.gnome.org/backgrounds>". Just download the background that you like, save it to some location and browse through that location and select that particular background.

Preferences

To customize the GNOME Desktop, click "Desktop" ---> "Preferences".

Task bar

The task bar is an applet which shows you the titles of running applications on any desktop.

Gnome Applet

An applet is a small application, designed to sit in the Gnome panel, providing quick and easy access to a control, such as clock, a volume control or a network status display etc.

Adding icons in Gnome panel

Gnome applets, applications that are already in gnome main menu and other custom applications can be added very easily to panel. Simply right clicking over the panel and select "Add to panel". Some of the useful controls that can be added in the gnome panel are show-desktop, logout, dictionary lookup, terminal, file manager etc.

The width and background of the panel can be altered. The panel can also be made to auto hide to have a bigger desktop area.

Screen Resolution

Screen resolution can be changed from "Desktop" --> "Preferences" --> "Screen Resolution". Refresh rate can also be adjusted. Flicking of the screen can be minimized by adjusting the refresh rate higher. But the refresh rate shouldn't be selected too high as it might damage your monitor if the particular refresh rate is not supported by your monitor.

Desktop Themes

Desktop themes can be changed from “Desktop” --> “Preferences” --> “Themes”. You can switch between different icons-sets and border style. New themes can be downloaded at <http://art.gnome.org/themes>.

Gnome Login screen

Login screen can be changed from “Applications” --> “System Tools” --> “Login Screen Setup” --> Graphical greeter. New themes can be downloaded at http://art.gnome.org/themes/gdm_greeter.

Fonts

Through “Desktop” --> “Preferences” --> “Fonts”, you can change font size and font-face displayed almost anywhere in gnome.

Multimedia

Most modern PCs come with CD-ROM, sound card and speaker. There are many applications through which you can listen to audio CDs, play audio digital files (mp3) and view VCDs. Some of such programs that are available with NepaLinux are :

For Playing Digital Audio Files

XMMS: The XMMS (X Multimedia system) applications can be used to play a wide variety of digital audio files format. These include the popular MP3 as well as the Open Ogg Vorbis format.

It can be launched from applications ---> Sound & Video ---> XMMS.

XMMS may need additional plug-ins to be able to play some of the audio file formats. If these are not already installed on your system they can be downloaded from the Internet.

Playing VCD/DVD

Gxine: Use Gxine to play VCD and DVD. You can start Gxine from the “Applications” --> “Sound & Video” --> “Gxine”
To play a VCD/DVD, place the VCD/DVD into the CD-ROM drive and select VCD/DVD from file menu

Using Totem

Totem Movie Player can be used to play VCD/DVD, Music CDs and Music files. Go to Applications/Sound & Video/Totem Movie Player. Place VCD into CDROM drive and select Play Disc from Movie menu.

Web Browsers

Mozilla

Besides having web browser, Mozilla-suite includes mail client, html editor and Address Book. To start Mozilla browser go to “Application” --> “Internet” --> “Mozilla Web Browser”.

“Applications” --> “Internet” --> “Mozilla Web Browser (ne)” is capable of rendering Devanagari font properly.

Adding Flash Plug in

1. Download flash plug-in for Mozilla for Linux from macromedia.com
2. Download “install_flash_player_7_linux.tar.gz”

3. Unpack the file. A directory called `install_flash_player_7_linux` will be created.
4. Navigate to this directory and from the command line type `./flashplayer-installer` to run the installer. Follow the process and provide the installation path of Mozilla. To verify that the plug in has been installed, restart Mozilla and choose Help > About Plug-ins from the browser menu.
5. Once the installation is complete, the plug in will be installed in your Mozilla browser. To verify, launch Mozilla and choose Help --> About Plug-ins from the browser menu.

Java Support for NepaLinux

Install the dummy Debian packages

```
#apt-get install java-common
```

Download the self-extracting .bin from <http://java.sun.com>

Set the downloaded .bin file as executable

```
chmod +x j2re-1_4_2_08-linux-i586.bin
```

execute it to unzip it

```
#!/j2re-1_4_2_08-linux-i586.bin
```

Move it somewhere that everyone on the machine can get to it

```
#mv j2re-1_4_2_08/ /usr/local/lib/
```

make a "jre" symbolic link

```
#ln -s /usr/local/lib/j2re-1_4_2_08 /usr/local/lib/jre
```

Update debian's alternatives so that Debian knows to use your Java executable

```
#update-alternatives --install java java /usr/local/lib/jre/bin/java 99
```

Set some shell variables in `/etc/bashrc` or your `~/.bashrc` so that java programs know where to find the JDK

```
export JRE_HOME=/usr/local/lib/jre
```

```
export CLASSPATH=$JRE_HOME
```

```
export PATH="$PATH:${JRE_HOME}/bin:${JRE_HOME}/jre/bin"
```

Adding Java VM Plug-in

1. Install jre (Refer to #Java Support in NepaLinux)
2. Make a link as follows

```
#ln -s /usr/lib/j2sdk1.4-sun/jre/plugin/i386/ns610-gcc32/libjavaplugin_oji.so /usr/local/mozilla-ne/plugins/
```

3. To verify, restart Mozilla and choose Help > About Plug-ins from the browser menu. You can also verify by opening up the following site "<http://java.sun.com/applets/other/TumblingDuke/index.html>"

Epiphany Web Browser

Epiphany is the yet another web browser for the GNOME desktop. Epiphany displays web pages with the same speed and accuracy as Mozilla Firefox. In addition, it has simple and uncomplicated user interface that fits in perfectly with GNOME.

Mail Clients

Mozilla Mail

Mozilla Mail comes with Mozilla suite. To open the Mozilla mail from Mozilla, click on the mail icon near the lower left corner of the Mozilla Navigator screen. The Mozilla Help contents, located under Help, provide much more information. Mozilla help can be read in Nepali also.

Account Setup with Mozilla Mail:

The first time you open mozilla mail, the “New Account Setup” dialog box will appear. Select “Email Account” as account type and click on next.

On the “Identity” dialog box, type your name and email address then click on next.

On the “Server Information” dialog box, choose POP or IMAP which one is more appropriate for you. Fill in the Incoming Server name(POP) and Outgoing Server name (SMTP) then click on next.

If you don't know the POP and SMTP address, please consult your network administrator

(Note: Selecting POP will download all your mails from mail server to your local computer. Whereas selecting IMAP will leave the mail in your mail server and mail client (e.g mozilla mail) acts like a navigator for mails in the mail server.)

Next, in the “User Name” dialog box, fill in the Incoming User Name. You may have to type in your full email address also. So, consult your network administrator or related party. Type in outgoing user name and click on next.

On the “Account Name” dialog box, type a name to refer to this account.

On the next dialog box, verify that all the information are correct and click on “Finish”.

Type the password. The mail configuration is now complete.

More accounts can be added from Edit --> Mail & Newsgroups Account Settings. Click on “Add accounts”, Account Wizard appears, follow the dialog box to complete the setup.

Evolution

Evolution provides integrated mail, address book and calendar.

Account Setup with Evolution

Go to “Edit” --> “Preferences”

Click on “Mail Account” and click on “Add” then click forward and provide your email details.

In the “Receiving Email” dialog box, choose server type (POP or IMAP) and provide POP address.

In the “Sending Email” dialog box, select server type as SMTP and type SMTP address. Click on forward and follow the dialog box.

Scanner

Working with xsane

Sane stands for "Scanner Access Now Easy" and is an application that provides access to image scanner hardware. To open Xsane, Open a terminal and type "xsane" command as root. A warning appears saying "You try to run Xsane as Root , that really is dangerous." click on "Continue at your own risk". Xsane scans for any scanner attached with the computer. If the detection is successful, Xsane program will be invoked and by default two windows will be displayed. Users can adjust brightness, contrast and resolution as per need. Apart from this, user can select from 5 different modes.

Once things like brightness, contrast and modes are selected, place material to be scanned in the scanner and select "Window" --> "Show Preview" from sane window and click on "Acquire preview" in the Preview window. Once the complete preview is displayed, user can mark the area which is to be scanned and click on "scan" from the Xsane window. Now you can save the file from "File" --> "Save Image" from the viewer window. Image can be saved in common formats like jpeg, png, tiff and other.

Misc

To automatically start application put it in Desktop --> Preferences --> Session --> Startup Program .

To make your preferred application the default application of the system e.g (browser, mail client) , select in Desktop -- preferences - preferred applications

To turn off system bell: Desktop --> preferences -- sound --> system bell

CD / DVD Writing

Erasing CD/DVD

Using Terminal Screen:

- * cdrecord dev=/dev/cdrom blank=fast --> Fast erase
- * cdrecord dev=/dev/cdrom blank=all--> Full erase

Burning files/folders into CD/DVD

1. Go to Applications-->Run
2. Type: nautilus burn:///
3. Drag files/folders into window
4. File Menu -> Write to Disc... -> Write

Burning Image (ISO) files into CD/DVD

- * Right click on Image (ISO) file -> Write to Disc... -> Write

Duplicating CD/DVD

- * Open terminal screen and do: dd if=/dev/cdrom of=image.iso bs=1024 --> Creates Image file of the CD/DVD
- * Right click on Image (ISO) file -> Write to Disc... -> Write

Creating image from folders

- * Open terminal screen and do: `mkisofs -o image.iso /folder`

Note: For Advanced CD/DVD burning you can use Gnome Baker , a GTK based application to burn CD/DVD

Running Gnome Baker

- Go to Applications--> Sound & Video → Gnome Baker

Printers

To add a new printer:

- * Go to Desktop > Administration > Printing
- * Click Printer > Add Printer
- * To configure a local printer:
 - ** Choose Printer Type: Local Printer
 - ** Click Forward to move to the next step
 - ** Choose Manufacturer from the list of manufacturers
 - ** Then choose the model and click Apply
- * To configure a network printer:
 - ** Choose Printer Type: Network Printer
 - ** Then either choose CUPS Printer (IPP) or Windows Printer (SMB) as required
 - ** Give the required information like URI/Host, Printer, username, password, etc.
 - ** Click Forward to move to the next step
 - ** Choose manufacturers from the list of manufacturers
 - ** Then choose the model and click Apply

Networking

Network Configuration

Simple Network configuration can be done using GUI network configuration tool.

- 1) Go to Desktop-->Administration-->Networking menu from the top menu panel.
- 2) If you are running NepaLinux from Hard disk, type the root password when prompted.If you are using NepaLinux from Live CD , you have to set the root password first and enter it after the setting the password

Steps for setting up root password:

- * Click the Terminal Screen icon at the top menu bar.
- * Do 'su -' to change the user to 'root'
- * Type: passwd
- * Enter the desired password twice.

- 3) Select 'Ethernet Connection'
- 4) Click Properties
- 5) Check 'This device is Configured'

- 6) Whether using DHCP or Static IP address consult your network administrator for the right one.
- 7) If your network uses static IP address select 'Static IP address' item and type IP address, subnetmask and gateway address. Ask your network administrator for the network information. If your network uses DHCP addressing just click DHCP and click OK.
- 8) In order for IP to name resolution you need a DNS server. Click DNS-->ADD and type the DNS server of your ISP or INTRANET and Click OK.
- 9) After the configuration click 'Activate' and finally the OK button.

Modem and internet account Configuration

External Modems

- 1) Connect the modem to serial port of your computer
- 2) Run Applications-->Internet-->GNOME PPP
- 3) Click Setup-->Detect
- 4) If your modem is not detected, select the appropriate one at Device. If your modem is connected to com2 of your computer select /dev/ttyS1.
- 5) Click Close
- 6) Type username, password and phone number of your ISP and click connect.

Internal Modems

Refer to nepalinux.org website.

File and Print Sharing with Samba

The printer is essentially an output device with which you are able to output text and graphics on to paper from digital data stored on the computer. If you have a printer attached to your system you will need to configure and set it up before you can use it properly.

To add a new printer

* Refer section Printers

To share a folder

Similarly to share a folder, make sure that the samba server is installed on your system. Then:

- * Right click on folder -> Share folder
- * Shared folder -> Share with: Select "SMB"
- * Share properties -> Name: Specify the share name

To share a parallel printer

Edit the following block in /etc/samba/smb.conf using your favorite text editor to look like as:

```
[printers]
comment = All Printers
browseable = no
path = /dev/lp0
printable = yes
public = no
writable = no
```

create mode = 0700

To share a USB printer

Edit the following block in /etc/samba/smb.conf using your favorite text editor to look like as:

```
[printers]
comment = All Printers
browseable = no
path = /dev/usb/lp0
printable = yes
public = no
writable = no
create mode = 0700
```

OpenOffice.org

Nepali OpenOffice.org

Nepali OpenOffice.org (OOo) is a complete office suite in Nepali, featuring a word processor (Writer), a spreadsheet application (Calc), and presentation software (Impress). Besides these fundamental office applications OOo also includes a vector drawing tool (Draw), database access program, publication of documents in the Portable Document Format (PDF) and presentations in the Flash (SWF) format! The OOo package is fully inter-operable with the Microsoft Office suite.

Using OpenOffice.org

As a first step for information, it is important to know how the Help system works. To get help:

Help --> Contents

The search function is very useful, and pay attention to the Options (where you can get help for the individual components in OpenOffice.org).

Setting up OpenOffice.org preferences make it work the way you want it . The entire controls for this are available at:

Tools --> Options

WRITER

This is a powerful tool for creating professional documents, reports, newsletters and so on – it is a word processor that allows easy integration of charts and pictures, as well as other OpenOffice.org-compatible documents. It can create anything from a simple letter to books, with professional layouts, with the use of styles.

Start it from the Main Menu by,

Applications --> Office --> OpenOffice.org Writer

Common Functions

Functions of the word processor can be controlled via the toolbars located at the top of the screen. On the first row, file actions like

opening and saving files can be performed, while on the second row, changing the font, size, and style (bold, underline, or italics) are located there.

They can also be controlled by the menus that are common through packages:

- * File --> New --> Text Document - Creates a new empty, untitled document for you to work on.
- * File --> Open - Opens the file.
- * File --> Close - Closes the document you are working on. If changes have been made since your last save, you will be prompted to save or discard those changes.
- * File --> Save - Saves the document you are currently working on.
- * File --> Save As... - Saves an updated version of a document in a different location, with a different name, from the previously saved version.

Common Operations

- * To copy text: Select the text with the mouse, then select Edit --> Copy. The selected text is kept in memory for use elsewhere.
- * To paste text: Find the spot where the text needs to be placed, place the cursor there, and then select Edit --> Paste.
- * To cut text: This means that the selected text will be removed from the current location and kept in memory, to be placed elsewhere. Doing this is exactly like how a copy should be performed, except selecting Edit --> Cut instead.
- * To undo an action: Select Edit --> Undo. It will display the command that it is undoing at the moment. By browsing the menu, there are also keyboard shortcuts located next to it. Once more proficient use of the package occurs, it is much quicker to use keyboard shortcuts like Control+C for Copy, and so on.

Formatting

Some of the quick formatting options are bold, italics and underline. These options are available at the toolbar at the top of the screen.

Text alignment plays a large role in controlling how portions of the document will look. For example, an address field at the top of your letter will have such details right-aligned, while the body and rest of the base text will be left-aligned. There are four-icons that are located next to the bold/italics/underline icons, providing options such as: right-align, centre-align, left-align and justified.

You can also highlight text and/or its background (like you would with a highlighter and paper!), and change the font and/or background colours all with the icons there.

Fonts

Changing the font, size, and style (bold, underline, or italics) are located in the second row. This can be done by highlighting the desired text and clicking the appropriate button.

Others

Writer has a built-in spell checker. This can be accessed via:

Tools --> Spellcheck

The option to auto-spellcheck means that while typing, Writer will dynamically check your spelling, and if it detects an error, it will output a red-line at the bottom of the misspelled word. Keep in mind that the spell checking is based on the current language that is in use. This can be changed via:

Tools --> Options --> Language Settings --> Languages

Accessing word counts in the document is different to most other packages on a default installation of OpenOffice.org (this can differ with several Linux distributions' offerings):

File --> Properties --> Statistics

It is under the Statistics tab that the word counts and other relevant document counts are based. On certain vendor modified distributions of OpenOffice.org, going to the Tools --> Word Count menu will allow the Statistics dialogue box to be displayed automatically.

CALC

This is the spreadsheet component of the OpenOffice.org package, and contains many useful features, including an array of functions and plenty of charting options. It is fully inter-operable with Microsoft Excel, though the function separators differ in the two packages.

CALC may be run opting for Applications --> Office --> OpenOffice.org Calc

or if you already have an existing window of OpenOffice.org open,

File --> New --> Spreadsheet.

Spreadsheets contain many rows and columns, and each row and column combination is called a cell (like A1, B4, and so on). Upon inputting text into a cell, you might realize that the text is wider than the cell allows – this can be re-sized via right-clicking the cell, and selecting the Format Cells option. Then under the Alignment tab, selecting Line Break is what is required.

Formatting

If there is some information that has already been created, and the area should be formatted, one particular quick and easy option would be to use the AutoFormats available in Calc. This is done after selecting the area and then opting for:

Format --> AutoFormat

These are pre-defined styles that are available in Calc, and if you have created your own particular style, you can add them into your new AutoFormats.

In the object toolbar, there is an option to set the font colour within the cell. There are also options to increase/decrease the indents within a cell, and in the image below, controls for enabling:

- Currency
- Percentage
- Add/Remove significant decimal places

These are quick controls, and accessing them is as simple as clicking the icons that represent them, and automatically the cell will be formatted as stated. Not only can the borders be set easily, and cell backgrounds too, but the alignment of text within a cell can also be set. This can be either as a top aligned, centre aligned, or bottom aligned.

Sorting

A big part of dealing with spreadsheets involves a lot of sorting and filtering of data. To sort a dataset, selecting the active cells, then on clicking

Data --> Sort

will call a pop-up dialogue that has options for sorting the data based on the columns present, as well as if the data should be ascending or descending.

IMPRESS

No office suite is complete without a presentation piece, and OpenOffice.org shows its colours with Impress, the presentation piece in the suite. To get started with IMPRESS you need to opt the following:

Main Menu --> Office --> OpenOffice.org Impress

or if you already have an OpenOffice.org window open, its available at

File --> New --> Presentation

Unlike other components of OpenOffice.org, when you start Impress, you are presented with an AutoPilot, to start creating your presentation! This gives you options to start a presentation with an empty template, or even with one of the pre-defined templates. A preview dialogue is available, and once all options are selected (and Next is clicked, to move on), you get a basic presentation.

Views

There are several views in Impress, and some have overlapping names, but with different functionality! Just above the scroll bars, you'll notice five buttons that look like what you see below.

The five options for workspace views are:

- * Normal view – normal look of the presentation
- * Outline view – overlook of the presentation.
- * Notes view – add speaker notes.
- * Handout view – how handouts get printed.
- * Slide Sorter – birds eye view to add, change, switch slides around.

All the views can also be accessed via:

View --> Workspace

It is also worthwhile to note that at the bottom-left-handcorner of your screen, where the slide tabs are displayed, there are more views to know about. You are typically located in the Slide View (same name as above, but different functionality since its on a different bar!)

However, Master Views are supported and to access this view, it is the second button from the left. You can have master views of all workspace views (i.e. a master view of the slide itself, notes, and handouts). The Layer view allows layering of slides (adding and removing), and layers can be non-printing or non-displayed on screen, but printing only.

Package Management

A package management system is a collection of tools to automate the process of installing, upgrading, configuring, and removing software packages from a computer.

Debian Package Management System

Debian is very popular for its package management system, the Advanced Packaging Tool (APT), for its strict policies regarding the quality of its packages and releases, and for its open development and testing process. Advanced Packaging Tool is a package management system used by Debian Linux and its derivatives including NepaLinux. APT greatly simplifies the process of installing and removing software on Unix systems by using the number of apt sources listed in /etc/apt/sources.list. For example, installation of php4 can be accomplished with a simple: apt-get install php4. APT is designed to work with .deb packages on Debian systems. You can install .deb package directly by not using APT tools as well. For example: Download php-4.x.x.deb file from any debian mirror as <http://www.debian.net> and do: dpkg -i php-4.x.x.deb.

Package Management in NepaLinux

As with Debian and Debian Derivatives NepaLinux also use apt/dpkg for package management. NepaLinux is based on Debian sid/unstable, so the packages it has are mostly based on Debian sid. Package management in NepaLinux can be done by two ways.

Using Synaptic GUI based package manager

You can easily install programs from Debian Repositories using synaptic.

Steps for installing packages:

- 1) Run Applications-->System Tools--> Synaptic Package Manager
- 2) Go to Settings-->Repositories and Check "deb ftp://ftp.debian.org/debian/ unstable main contrib" and Press OK
- 3) Click Reload at the top menu bar to update the list of softwares from Debian repositories
- 4) On the left side you will see the packages list categorized.
- 5) Click any section that you wish to install.
- 6) After clicking you will see the packages at the right side that can be installed online. Select the one you need.
- 7) Right click it and select 'Mark for Installation'
- 8) Then at the top menu bar, Click Apply.
- 9) Then it will automatically try to install the dependencies. Just Click Apply.
- 10) It will download and install the package notifying that "Changed applied"
- 11) After that the shortcut will be automatically added to the related Applications/Debian menus.

Remember, sometimes the install process requires user's input. So, while the Installing and Removing screen appears, click the terminal link and answer the questions. Default option is recommended. Click ' Automatically close after the changes have been successfully applied' option to close the active window after installation.

Using command line

- 1) Edit /etc/apt/sources.list ,Uncomment "deb ftp://ftp.debian.org/debian/ etch main contrib" , Save and Exit
- 2) Do: apt-get update
- 3) Do: apt-get install php4

- 4) Then it will automatically try to install the dependencies if needed. Just Press Y
- 5) It will download and install the package adding the shortcut to the related Applications/Debian menus.

Some useful commands and tools for package management

Working with repositories

- * apt-get update --> update the list of softwares from Debian repositories that can be installed
- * apt-get install packagename--> install or upgrade the package. upgrade if not installed previously or new version available.
- * apt-get remove packagename --> remove the package
- * apt-get -d install packagename --> Download the package . Check /var/cache/apt/archives
- * apt-get clean --> Removes the .deb files that are downloaded and installed while using apt-get install packagename
- * apt-get dist-upgrade --> Upgrades every single packages to newer version if available
- * apt-cache search searchkey --> Search the repositories using searchkey.

Working with debian packages

- * dpkg -i packagename-version --> installs/upgrade the package, upgrade if not installed previously or the package is newer than the installed one.
- * dpkg -r packagename --> removes the package
- * dpkg -l --> Lists the installed packages
- * dpkg -L packagename --> Shows the files and directories created by package
- * dpkg -s packagename --> Shows the information of the package
- * dpkg -S filename --> Finds package owing the file
- * dpkg-reconfigure packagename --> Reconfigures the package's configuration

Upgrading

Upgrading NepaLinux

Upgrading of NepaLinux is highly recommended to be done only through the upgrade CD which can be downloaded from NepaLinux.org in future. However, the upgrade can be done by using the Debian repositories as well. Few useful commands for upgrading of packages are listed and briefly defined below.

Using command prompt and as user 'root'

* Edit /etc/apt/sources.list , Uncomment "deb ftp://ftp.debian.org/debian/ etch main contrib" , Save and Exit

* apt-get update && apt-get dist-upgrade --> upgrades each and every packages of the current distribution. packages whose newer version is not released will not be upgraded.

* apt-get update && apt-get install gnome-desktop-environment --> Upgrades packages related to newer gnome desktop .

Note: Remember to run: localeup2date command after doing anyof the above upgrades as user root.

Using GUI Synaptic package manager

Upgrading the distribution

- 1) Run Applications-->System Tools--> Synaptic Package Manager
- 2) Go to Settings-->Repositories and Check "deb ftp://ftp.debian.org/debian/ etch main contrib" and Press OK
- 3) Click Reload at the top menu bar to update the list of software from debian repositories
- 4) Click "Mark All Upgrades"
- 5) Click "Mark"
- 6) Finally Click "Apply" .
- 7) It will download and install the package notifying "Changed applied'.
- 8) Restart the machine after the upgrade.

Upgrading gnome desktop related packages

- 1) Run Applications-->System Tools--> Synaptic Package Manager
 - 1.1) Go to Settings-->Repositories and Check "deb ftp://ftp.debian.org/debian/ etch main contrib" and Press OK
- 2) Click Reload at the top menu bar to update the list of software from debian repositories
- 3) Click GNOME Desktop Environment at the left panel. The list of packages of Gnome Desktop will be listed at the right panel. If any upgrade is available , a green icon with yellow star will be displayed. Complete green icons mean packages installed but no newer version of that package is available.
- 4) Right click all the desired items and click 'Mark for upgrade' that has a green icon with yellow star stuck it. You can always click 'UnMark' to not install it.
- 5) It will automatically try to install the dependencies. Just Click Apply.
- 6) It will download and install the package notifying that "Changed applied'

Upgrading Individual Packages

You can upgrade individual packages if the new version of the package is available.

Upgrading using command line

- * Edit /etc/apt/sources.list , Uncomment "deb ftp://ftp.debian.org/debian/ etch main contrib" , Save and Exit
- * apt-get install packagename--> install or upgrade the package. upgrade if not installed previously or new version available.
- * Download the package and run: dpkg -i package name-version --> installs/upgrade the package, will upgrade if not installed previously or the package is newer than the installed one.

Upgrading using GUI synaptic package manager

- 1) Run Applications-->System Tools--> Synaptic Package Manager
 - 1.1) Go to Settings-->Repositories and Check "deb ftp://ftp.debian.org/debian/ etch main contrib" and Press OK
- 2) Click Reload at the top menu bar to update the list of software from debian repositories
- 3) On the left side you will see the packages list categorized.
- 4) Click any section that you wish to upgrade. The list of packages will be listed at the right panel. If any upgrade is available, a green icon with yellow star will be displayed. Complete green icons mean packages installed but no newer version of that package is available.
- 4) Right click all the desired items and click 'Mark for upgrade' that has a green icon with yellow star stuck to it. You can always click 'UnMark' to not install it.
- 5) It will automatically try to install the dependencies. Just Click Apply.
- 6) It will download and install the package notifying that "Changed applied"

Using Repositories

The /etc/apt/sources.list is a file that lists the 'sources' from which packages can be obtained. The first word on each line, deb or deb-src, indicates the type of archive: whether it contains binary packages (deb), that is, the pre-compiled packages that we normally use, or source packages (deb-src), which are the original program sources plus the Debian control file (.dsc) and the diff.gz containing the changes needed for 'debianizing' the program. Eg.

- * deb http://http.us.debian.org/debian stable main contrib non-free
- * #deb-src http://http.us.debian.org/debian stable main contrib non-free

Note: A line with a '#' in front is ignored by apt-get as it is treated as a comment.

In order to add extra repository, appropriate address has to be added.

Run apt-get update after modifying the /etc/apt/sources.list file. You must do this to let APT obtain the package lists from the sources you specified.

After doing apt-get update, the apt-cache search <packagename> command can be used to search whether the needed package exists. And if that package does exist, then the apt-get install <packagename> command can be used to install the package and all its dependencies.

Kernel Upgrading

Kernel Upgrading will be possible only in hard disk installation of NepaLinux. Download the latest kernel available for NepaLinux from <http://NepaLinux.org/kernel> and use the following commands.

- * `dpkg -i kernel-version.deb`

- * `dpkg -i kernel-source-version.deb`

Remember to check your kernel version before upgrading using 'uname -a'. New Kernel will also be included in the NepaLinux Upgrade CD if available and will be automatically installed at the time of upgrading of NepaLinux using upgrade CD.

Getting Help

NepaLinux is the effort of promoting OpenSource Softwares specially GNU Linux. NepaLinux is based on Debain GNU/Linux. There are several places to look for assistance if you need it:

- * Madan Puraskar Pustakalaya support forum. <http://www.mpp.org.np/forum>, <http://www.NepaLinux.org/forum>

- * NepaLinux Mailing List. <http://www.NepaLinux.org/lists>

- * The Debian Documentation. <http://www.debian.org/doc/>

- * IRC for realtime queries. <http://www.freenode.org/>

- * The Debian mailing lists. <http://lists.debian.org/>

- * Community Resources.

 - <http://forums.debian.net/>

 - <http://www.debianplanet.org/>

 - <http://www.debianhelp.org/>

 - <http://www.linuxquestions.org/>

Troubleshooting

Sometimes things do go wrong and users have to go to the recovery mode to troubleshoot such problems. In this section, we look at some ways to gain root user access without login and/or to change password. If you have any more queries on troubleshooting, please visit <http://www.NepaLinux.org/forum> for solution.

To gain root user access without login

Sometimes users have to go to recovery mode to gain root user access without login for troubleshooting. Following steps should be followed to do so:

- * Boot-up computer

- * If GRUB menu is hidden, press 'Esc' to enter the GRUB menu

- * Select
- ** NepaLinux, kernel 2.6.12-3 (recovery mode)
- * Press 'Enter' to boot

To gain root user access by modifying kernel boot-up arguments

It might also become necessary to modify kernel boot-up arguments to gain root user access. In such cases, the following steps are necessary:

- * Boot-up computer
- * If GRUB menu is hidden, press 'Esc' to enter the GRUB menu
- * If GRUB password is set, press 'p' to unlock the GRUB menu
- * Select
- ** NepaLinux, kernel 2.6.12-3
- * Press 'e' to edit the commands before booting
- * Select
- ** kernel /boot/vmlinuz-2.6.12-3 root=/dev/hda2 ro quiet splash
- * Press 'e' to edit the selected command in the boot sequence
- * Add "rw init=/bin/bash" to the end of the argument
- ** grub edit> kernel /boot/vmlinuz- 2.6.12-3 root=/dev/hda2 ro quiet splash rw init=/bin/bash
- * Press 'b' to boot

To change root user password if forgotten

If the root user password has been forgotten, users can go to recovery mode and change the root user password:

- * passwd root

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2. <http://www.debian-administration.com>
3. <http://www.debian.org>
4. "User Guide to Using the Linux Desktop" published by UNDP – APDIP
5. http://hurring.com/howto/java/debian_install/
6. <http://www.gnome.org>
7. Novell & SUSE LINUX Courseware

Appendix

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